

SHORT PAPER
RESISTING ORGANIZATIONAL CHANGE

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Abstract—We are continuously reminded of how change induces controversy and resistance, regardless of support. We repeatedly experience resistance in difficulties of implementation, little progress, and poor results, rather than increased productivity as anticipated. In a detailed account of how change plays out, a mosaic of what resistance looks like emerges. The picture is both familiar and absolutely concrete, and challenges the structural assumptions and dichotomies on support and resistance in an organization. The findings invite technologies, people, actions, practices and materiality to the discussions on support and resistance.

Index Terms—Change Management, Lean Operations, Actor-Network Theory, Resistance.

I. INTRODUCTION

Lean literature emphasizes the importance of top management support [1]–[3], but we are continuously reminded how change, like introducing Lean operations into an organization, induces controversy and resistance regardless of initial support. We repeatedly experience resistance in difficulties of implementation, little progress, and poor results rather than increased productivity as anticipated [4].

Literature has introduced concepts like *force* and *friction* [5] to account for resistance. Concepts borrowed from physics to illustrate interactions between related objects, given both positive and negative influence on change. Other approaches include attention and awareness to controversies and alliances, and concepts like *the sociology of translation* [6], [7]. These, and related concepts, do have extended impact in academic discourse, but fail to be noticed within the field of Lean Operations. They fail, I will argue, because the generic and abstract concepts and metaphors disconnect theory from people, materiality, practices, and processes on the Gemba (the real place), and in the workplaces. They fail to prove to be relevant.

This simple line of arguments challenges our understanding of what is going on, and motivates the question: **What does resistance look like in a change project?**

The renewed focus on events and processes in the workplaces is important, because it invites technologies, people, actions, practices and materiality to the discussion.

II. METHOD AND MATERIAL

The problem statement suggests a more concrete approach to change; not looking at change as a structural or ideological issue, but looking at concrete events and contributions to change in the making.

The methodological approach in this study draws on the perspectives on construction of facts, and assembly of technologies and practices found in the works of Bruno Latour, John Law, Michel Callon and others - part of what is known as Actor-Network Theory (ANT) [8]–[14].

This descriptive, but analytical, approach is about opening up the black box of change. It requires looking at the processes leading up to the changes, as opposed to the end product or result alone. It is about contributing to an increased sensitivity towards the practices and processes of change.

The framework introduces actors based not on categories, but on actions and contributions. Removing the categories implies removing the presumptions of the special nature of someone, or something, and introduces the same theoretical framework and concepts for all actors. This may be a challenging position, but it is also rewarding, because it enables us to treat different elements in the project as parts of the same instead of unrelated parts of different theoretical frameworks, levels or domains. Treating all actors within the same framework makes it possible to build an awareness and sensitivity based on findings excluded from the literature criticized earlier.

The starting point is the implementation of Lean Operations in a manufacturing company in Norway. The reader who is unfamiliar with Lean could think of it as a methodological effort to improve quality in production based on removing waste in a broad understanding, and optimizing flow of goods and information. Lean operations represent a radical change in both design, and practices of production in most factories.

“The Assembly of Lean production” [15] analyzes, in depth, the making of the project, practices, and processes, but the data and analysis also represent great opportunities to explore resistance in a change project in more detail.

III. RESULTS

A. Background

The development project was organized in three phases, over a period of almost three years. The first phase targeted the mapping of work processes and organizational culture, identifying pitfalls and bottlenecks in the value stream. The second phase targeted measures and activities for the selected pitfalls and bottlenecks, and the third phase targeted the implementation and continuous evaluation of measures chosen.

In the first phase, work was concentrated in the project team with regular meetings approximately every fourteen days. In the second phase, the work opened up to involve a broader group, including operators in the factory, and other actors identified in the production process mapping. This way the project went through a major metamorphosis. What had been a project of a small number of individuals, choosing to take part, became a project involving “everyone”, including outside services, and departments. In the third phase, the project went from ideas and plans, to radical changes in the way to do production.

B. The Quality Management System (QMS)

The quality system (QMS) got an important role in the project. It became the major official source of data on the progress of the project, but, early on, it also became a symbol of change from the old way of doing production. None of these roles were naturally given or passively acquired; they proved to be an effect of the contributions from many actors over a long time.

Seen from the workplace, and a user driven perspective, the old QMS had an irrelevant and insignificant role in the way of doing production, because it was isolated from the operators in production. There was no IT hardware available on the Gemba. Operators had neither access to the system, nor training in the use of the system. It was not experienced as a part of the way to do production. In retrospect the picture is somewhat different. Yes, seen from a user-driven perspective, it can be argued that the QMS was not part of the way to do production, but it can be argued, that this is not what the QMS is about. The factory had a working, well-established QMS, and procedures for using it. It was an electronic system supplemented with hard copies, where complaints and divergences were reported on paper, and handed in to the production manager. The production manager did a quality check, and registered the data in the electronic system. This way it was very much part of the way to do production, and illustrated the task and role sharing in the factory. The old QMS represented and inscribed hierarchical and hegemonic practices that were part of the way to do production in the factory. The old QMS was a tool to set major economic differences between departments, but not a tool for making continuous improvements.

C. Introducing Lean Operations

The practical and ideological gap between the old and new QMS is illustrated in the ratio of divergences versus complaints (about 1:1 in 2007). In a Lean perspective the number should be at least 3:1-- the higher ratio the better-- indicating an approach to production that identifies and stops the defects before they end up as complaints, and economic losses.

The Lean rhetoric of flow and waste, and continuous work improvements introduced [16], put the role of the QMS on the agenda. It became essential to know details and facts behind the waste in order to develop measures to address the problems in a systematic way.

The project team decided October 10, 2007 to "Include the QMS in the project. Start the process of redesigning the databases to better reflect the actual challenges. Make the QMS a central tool in local development of production". But it was not until November 19, 2008 that the "The hardware is in place. Training of all employees at the department is completed and the use of QMA (QMS) and AS400 is in progress. Evaluation and possible follow-up of training remains".

The redesign included a new scheme that allowed operators to access the system; new and improved procedures; and new layouts to increase the diagnostic features of the system. New roles were created to establish a new workflow where everything didn't go to the manager, but instead was directed to operators responsible.

Now, the main users in the QMS are the ones doing the different tasks in production. The operators write and update the procedures, file and respond to divergences and

complaints. The effects are actual changes of practice, and not only in the rhetorics which is illustrated in reduced numbers of procedures, increasing ratio of divergences versus complaints, and sources of defects identified.

D. Filaments of Resistance

The time gap illustrates the many obstacles, and the resistance to changes taking place. At the same time, it was a project with strong support from top management, production managers, and the trade union. The project team experienced this blend of resistance and support as a paradox, and a source of much frustration.

The analysis establishes both the old and new QMS as pieces of technology that inscribe and support certain ways of doing production. This way the analysis implies the coexistence of multiple ways of doing production in the factory and explains the heterogeneities of resistance, and support observed. A resistance not linked to individuals, but to practices inscribed in technologies, procedures, structures, training, and schemes of doing production.

The first resistance identified were the factory rules on denying operators access to the QMS. The factory rules and procedures were clear, in a way, but, at the same time, there had been a development project on production efficiency in a different department that had been allowed to bypass the procedures and grant the operators access to hardware and training in the QMS. That project had improved the efficiency significantly in the department in question, and left a door open for us to use.

The second resistance identified was missing IT hardware on the shop floor. Rules or not, no computers were initially available for the operators to use according to the Lean Operations plan.

The third resistance identified was missing training. The QMS was a complex system based on Lotus Domino databases requiring training and skills to be used effectively. This was not in place.

The fourth resistance identified was infrastructure. The project team was informed by internal IT support that the present network infrastructure made it impossible to use the system because the bandwidth was inadequate for our use. The location of the factory, and the network infrastructure, further made it impossible to increase the bandwidth to the level required. Since we already had a working connection for the production manager, the bandwidth requirements were challenged, and after much back and forth, a solution was established based on our local needs, and not a general access to all the intranet services.

IV. DISCUSSIONS

A. What Did Resistance Look Like?

This project had espoused practical, and financial support. At the same time, the obstacles were many, as was the resistance exemplified in the QMS, and illustrated in the long time it took to establish the new QMS and practices. In a situation like this, it is easy speculate about blame. In retrospect, this was not about blame at all. It was about a much stronger, and more serious opponent. It was not about trying to convince a person or a group. Findings suggest that the stronghold of the resistance was among others who preferred the old QMS, and their allies who were embedded in those methods of production, and inscribed in the associated technology and practices, and work organization established.

The new QMS produced and interrelated what we could think of as *emissaries* [6, pp. 251–254] that aligned the network of procedures, schemes, technological infrastructure, and trained people. The *emissaries* inscribed the new way to do production, and made the QMS become an apparatus that materialized our understanding of Lean Operations, in electronic documents and procedures, acting as agents sent on a mission to represent the project, making it possible for the project's ideas to become both mobile and in compliance with our understanding. This way, the quality system goes from a neutral artifact, uninteresting and forgotten, to a biased actor, taking part in how the changes transform the way to do production.

The analysis and discussions on the assembly of the new QMS bring forward the strange relationship between resistance and support. Not as an individual “problem” (even if that could be a part of the challenge, of course), but as an effect of another actor-network present in the factory. This way, it is not, anymore, about the dichotomy of support or resistance, but both at the same time. We will have to anticipate resistance in the presence of strong support, as in our case. This acknowledgement links resistance to technologies, practice, and the materiality, and address the “strange” example of someone supporting the project, while at the same time, being part of a practice that resists the project, showed in the analysis of the new QMS.

The heterogeneity of resistance and support illustrates how it is no longer about management support, it is about the way to do production and the materiality and the people part of these practices. We have to anticipate a multiplicity of rationalities, discourses or actor-networks sharing the same space in the factory especially in a period of changes.

The heterogeneity of resistance and support also confronts us with someone we know, when we try to answer the question about what resistance looks like. Resistance looks like our own factory, technologies, software, procedures, training, schemes and people. It is us. To cite Pogo: “We have met the enemy and he is us.” [17].

B. Introducing a Metaphor to Understand Resistance

It is argued that the resistance was not about individuals trying to “sabotage” the project, but about the presence of another actor-network, embedded and entangled in the materiality of the factory. It was an actor-network in many ways like the one we were assembling. The factory was therefore, not a tabula rasa, but full of actors already making up a network. To make it even more challenging, this “other” thinking was inscribed in many of the structures and technologies in the factory. It was not about convincing individuals with rational or emotional arguments, but about challenging technologies, practices, and the way we do production. It was, therefore, not only about assembling Lean Operations in an empty room, but about assembling something stronger, better, more significant, and more relevant than that already present.

The factory was not an empty place for us to “transfer” our new QMS and related practices. The landscape was already full of actors assembling a strong network, and our biggest error was to treat it as empty, and virgin. It was like trying to teach students about force and momentum in physics, without taking into account all the conceptions about these, and related, phenomena already in the heads of the kids. We met resistance from the already

established framework and practices, that, from the project perspective, seemed like misconceptions. Neither the factory, nor the kids are tabula rasa. We better take that into account when trying to introduce a competing conceptual framework and practice even if the space seems empty.

The new network was assembled in the presence of, and in competition with, the already established practices. The metaphor of learning and misconceptions is used to illustrate the resistance in the factory, and the presence of an alternative actor-network. This was a resistance not based on rational individuals to be convinced, but on practices inscribed in the way to do production, and therefore, a much stronger opponent.

Resistance becomes a passive, as opposed to an active process. The practical implications are seen as part of introducing the new way to do production, and in how to make it stick. As part of the new way to do production, this understanding presents the existence of alternative practices, already part of the materiality in the factory. That can be in the way the work is organized, the procedures established, the economical scorecard in the company and embedded in technologies and software in use. To establish something new is not about establishing something on a tabula rasa. It is the opposite; to establish something in parallel and competition with something already in place. To establish something new is then about recruiting allies from within the people and materiality of the factory. This way, it also becomes easier to build on and not compete with local knowledge, know-how, machines, and experiences in the factory, as they are seen as possible allies. The commitment and contribution from the actors is the key to establishing the way to do production; the same way the project cannot live without the commitment and contributions of those who have created it. It means, that if the project fails, it is because the individuals, technologies, and structures in the factory have abandoned it.

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